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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,519	09/13/2001	Yu Wang	040489-0177	2614

22428 7590 07/11/2002

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EXAMINER

DONOVAN, LINCOLN D

ART UNIT PAPER NUMBER

2832

DATE MAILED: 07/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/682,519

Applicant(s)
Wang et al.

Examiner
Lincoln Donovan

Art Unit
2832



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on May 6, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above, claim(s) 23-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 7-11, 14 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laskaris et al. [US 6,198,371] in view of Kim [US 6,336,794].

Laskaris et al. disclose an open magnet assembly with a floor mount comprising:

- a first assembly [12] mounted about a first longitudinally-extending and generally-vertically-aligned axis including:

- at least one superconducting main coil [24] positioned around the axis; and

- a vacuum enclosure [26] enclosing the at least one superconductive main coil;

- a second assembly [14] mounted about a second longitudinally-extending and generally-vertically-aligned axis coaxially aligned with the first axis and spaced longitudinally apart from and disposed below the first assembly, the second assembly including:

- at least one superconducting main coil [30] positioned around the axis; and

- a vacuum enclosure [62] enclosing the at least one superconductive main coil;

- at least one support beam [16, 18] external to the first and second vacuum enclosures having a first end attached to the first assembly and a second end attached to the second assembly; and

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- a support apparatus [20] supporting both assemblies from a floor [42].

Laskaris et al. discloses the instant claimed invention except for the support apparatus providing vibration isolation and the specific isolation system used.

Kim discloses an vibration isolation system [figure 1] with a plurality of isolators [40] for a piece of machinery [10].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a vibration isolation system for the support structure of Laskaris et al., as suggested by Kim, for the purpose of reducing vibration of the open magnet assembly.

Kim discloses the vibration isolation system mounted on a floor assembly [50] supporting a support member [30] supporting the machinery away from the floor structure [figure 1].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the isolation support mounting design of Kim in Laskaris et al., as modified, for the purpose of isolating the device from the floor structure.

The specific footprint of the isolation system and its use as a retrofit would have been obvious design considerations for the purpose of reducing space usage and costs.

3. Claims 2-4, 12-13, 15-17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laskaris et al. in view of Kim as applied to claims 1, 7-11, 14 above, and further in view of Ohsaki [US 6,202,492].

Laskaris et al., as modified, discloses the instant claimed invention except for the isolators being adjustable and actively pneumatically controlled.

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Ohsaki discloses a surface [6] being supported by adjustable actively controlled pneumatic isolators [4a-d, column 5, lines 1-12].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to the isolator design of Ohsaki for the isolators of Laskaris et al., as modified, for the purpose of accommodating variations in the operating environment.

The specific frequencies, Q-factors, bandwidth, etc. of the control would have been obvious design considerations based on the specific application and environment of use.

4. Claims 5-6 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laskaris et al., as modified, as applied to claim 1 and 14 above, and further in view of Braun [US 4,781,363].

Laskaris et al., as modified, discloses the instant claimed invention except for the use of balance weights on the isolators.

Braun discloses the use of balance weights [9] mounted on an isolator.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use balance weights on the isolators of Laskaris et al., as modified, for the purpose of accommodating unexpected balance shifts.

It would have been obvious to have the amount of weight applied be adjustable for the purpose of accommodating varying operating environments.

Response to Arguments

5. Applicant's arguments filed 05-06-02 have been fully considered but they are not persuasive.

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Applicant argues:

[1]: Laskaris teaches away from applicant's claimed invention since the MRI system must be rigidly fixed to the floor to reduce vibration;

[2]: Kim does not provide motivation to add vibration isolation system to an MRI assembly;
and

[3]: Kim is non-analogous art.

The examiner disagrees:

Regarding [1]: Laskaris teaches the use of a skirt to support the MRI system. Laskaris does not teach that the skirt is used for vibration reduction. The vibration reduction system design of Kim suppresses vibration. Applicant has not claimed, nor has examiner considered, any structural differentiation between the vibration reduction design of Laskaris, as modified by Kim, and the invention as claimed. Applicant merely claims "a vibration isolation system." As argued by applicant [applicant arguments, page 4], the support ring of Laskaris would perform this function.

Regarding [2]: Applicant and Kim show systems to reduce vibration. A skilled artisan would have been motivated to seek solutions, such as Kim, to isolate machinery from vibrations.

Regarding [3]: In response to applicant's argument that Kim is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24

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USPQ2d 1443 (Fed. Cir. 1992). In this case, both applicant and Kim seek to isolate machinery from vibration.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Lincoln Donovan whose telephone number is (703) 308-3111.

The fax number for this Group is (703)308-7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703)308-0956.

LDD

July 7, 2002


LINCOLN DONOVAN
PRIMARY EXAMINER
GROUP 2100